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(54) **UNIVERSAL SCOPE MOUNT FOR FIREARM**

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(58) **Field of Classification Search** 42/85, 124, 42/125, 126, 127, 129
See application file for complete search history.

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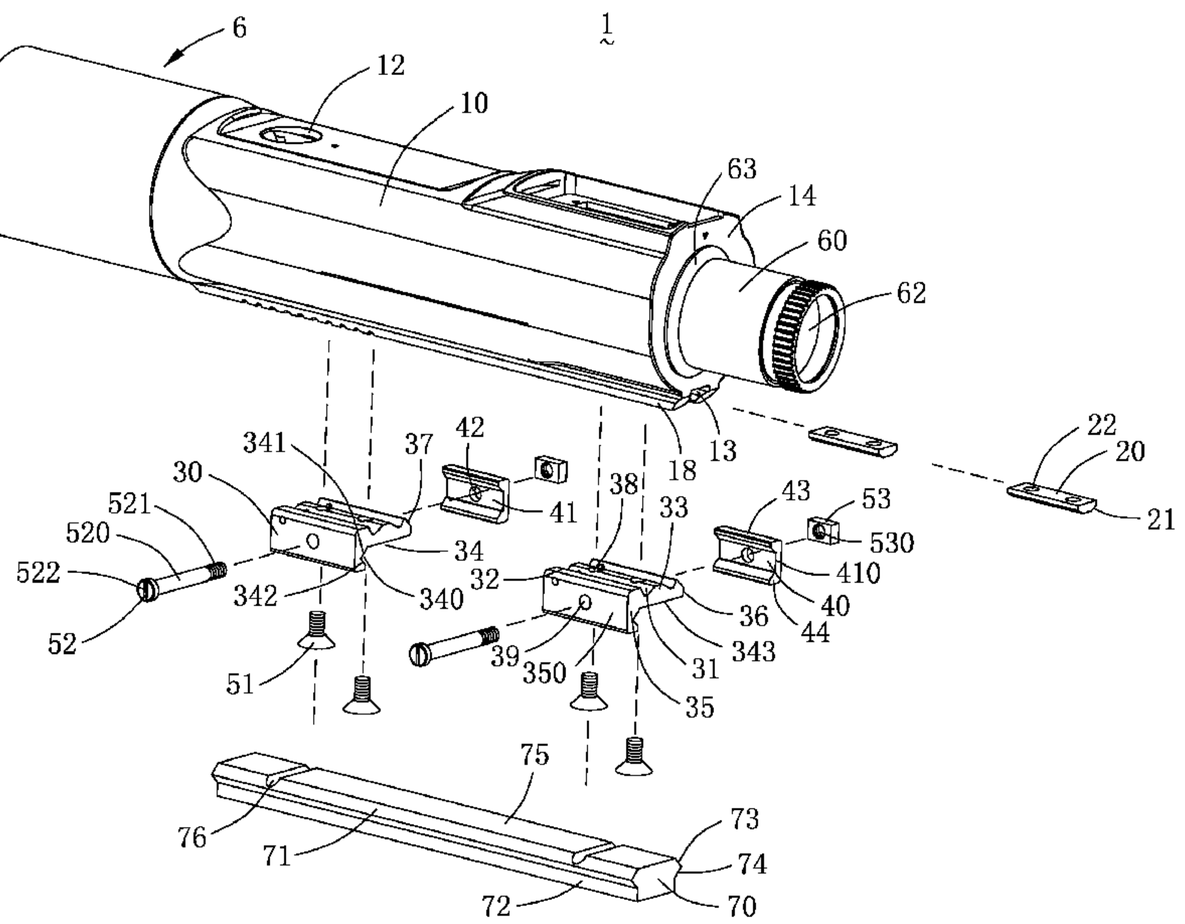
(57) **ABSTRACT**

A universal scope mount includes a housing and a pair of mounting assemblies. The housing has a chamber defined through front and rear ends thereof and having an inner contour conforming to an outer contour of a body of a scope or an accessory to be received therein, a channel downwardly exposed and extending parallel to the chamber and a pair of projections formed along respective opposite sides of the channel. The pair of mounting assemblies is used to respectively secure a front end portion and a rear end portion of the housing to the mount base of the firearm. Each mounting assembly includes a slider to be slidably received in the channel of the housing and supported by the projections of the housing, a mount member to be disposed between the housing and the mount base of the firearm, securing means to securely connect the mount member to the upper attachment surface of the mount base of the firearm, and fastening means to reliably assemble the housing, the slider and the mount member together. The slider has a cross-sectional contour substantially complementary to a cross-sectional contour of the channel of the housing. The mount member has an upper mating surface defining two grooves to receive corresponding projections of the housing therein and a bottom opening having a cross-sectional contour substantially complementary to a cross-sectional contour of the mount base of the firearm.

19 Claims, 9 Drawing Sheets



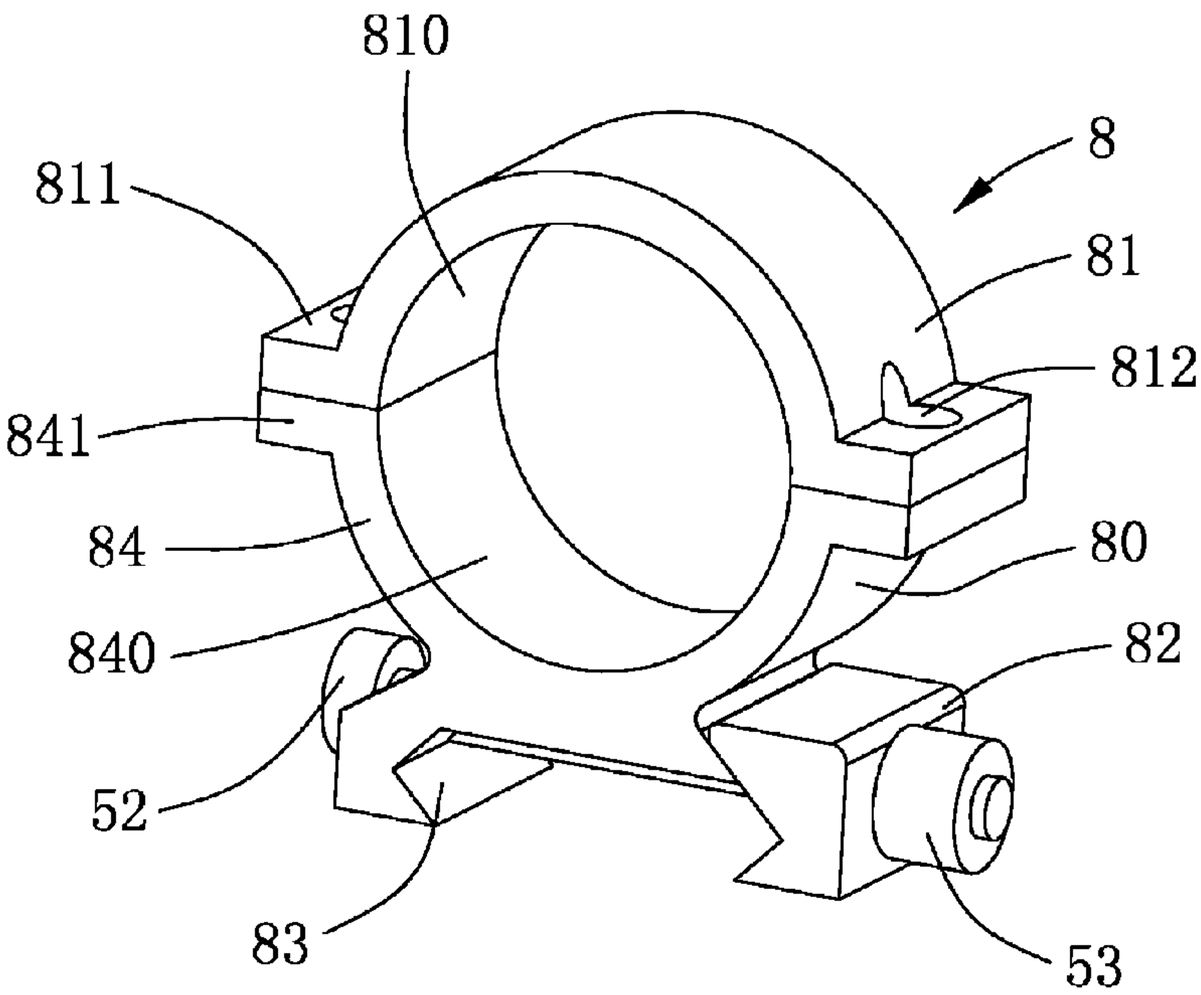


FIG. 1
(PRIOR ART)

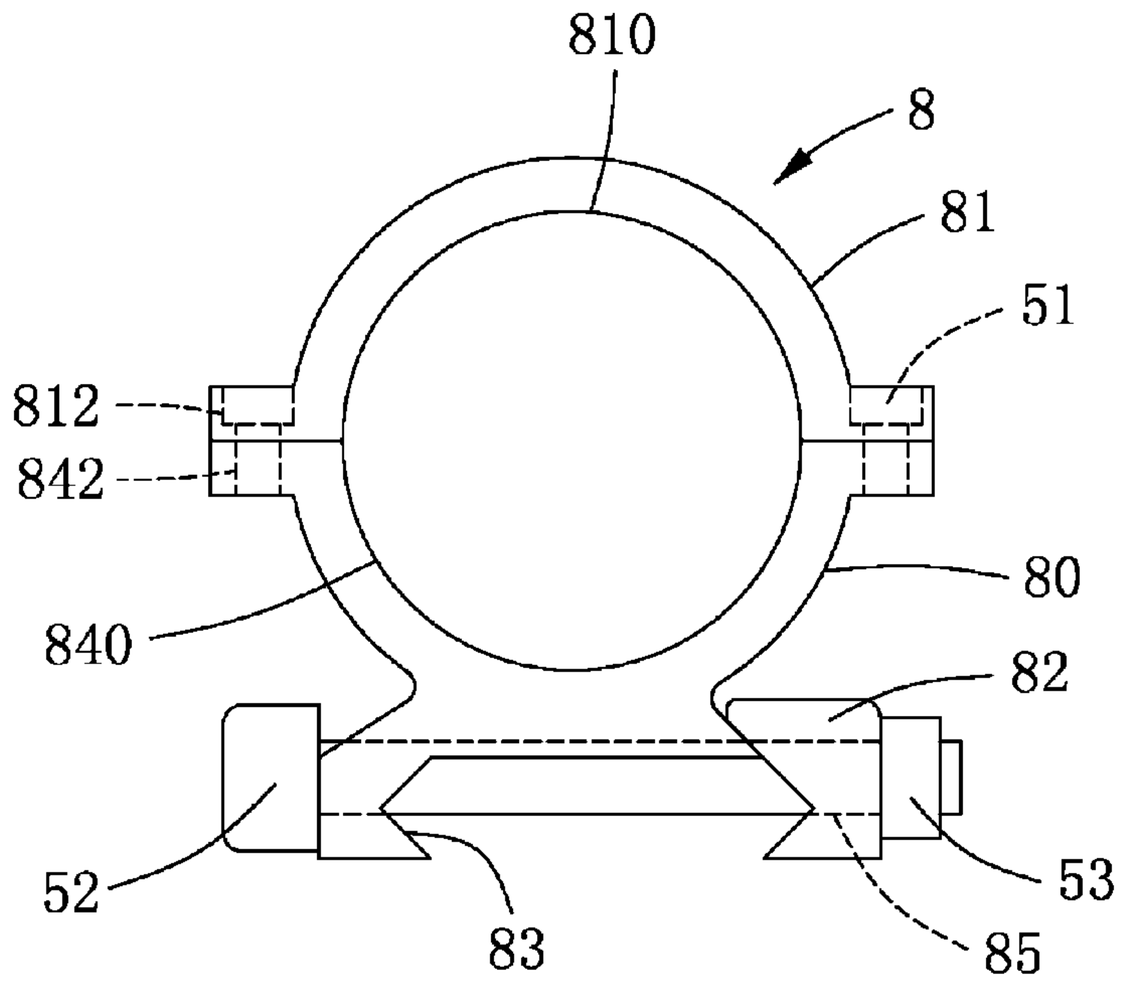


FIG. 2
(PRIOR ART)

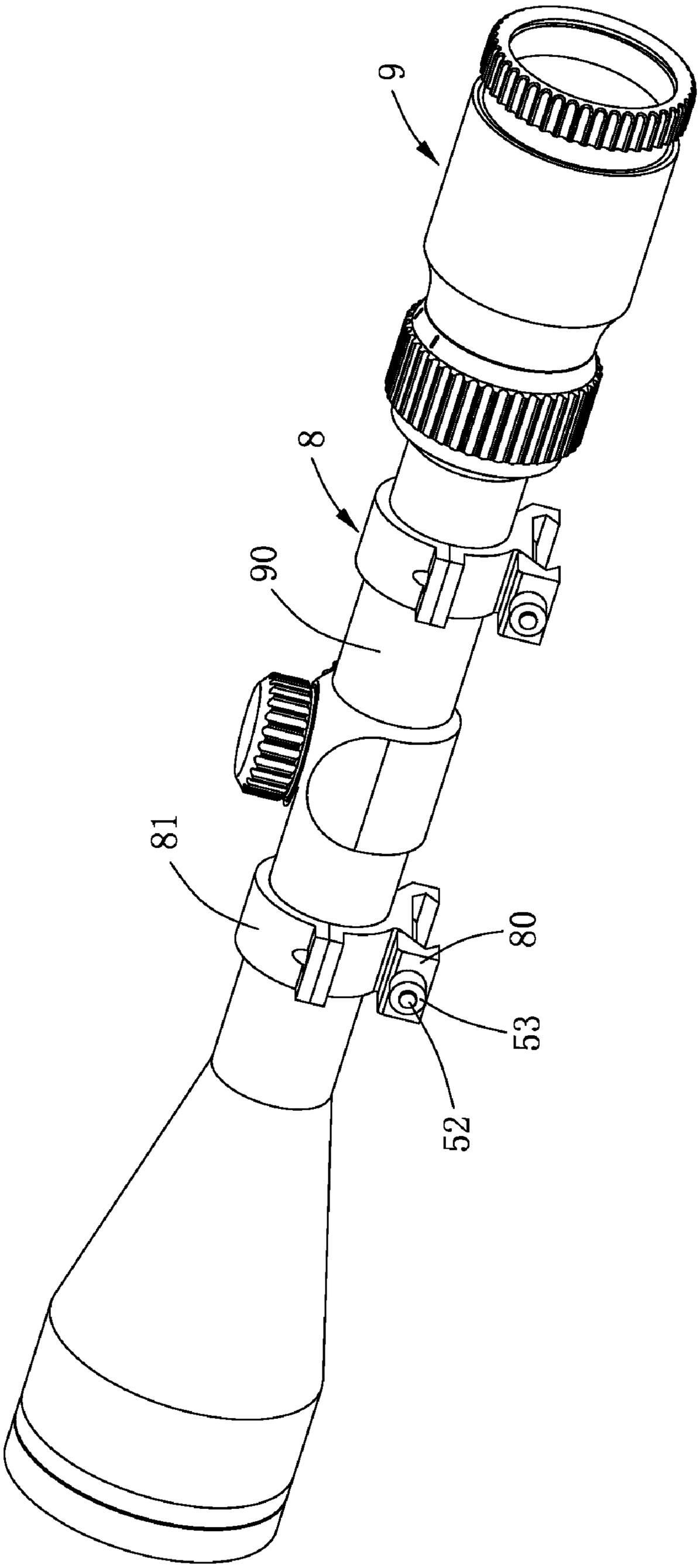


FIG. 3
(PRIOR ART)

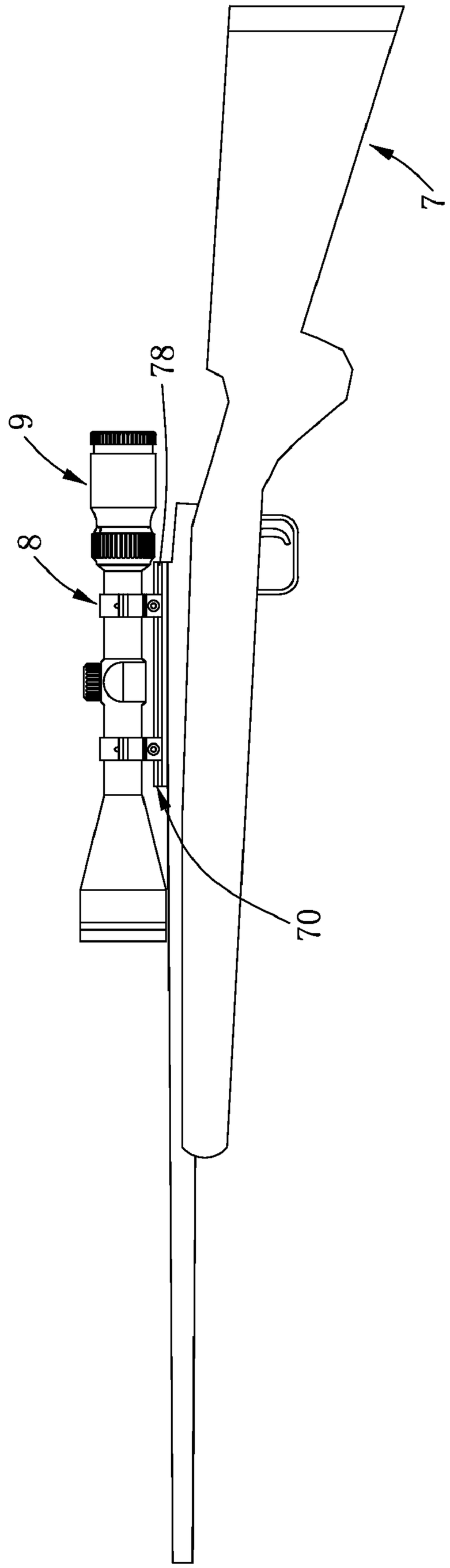


FIG. 4
(PRIOR ART)

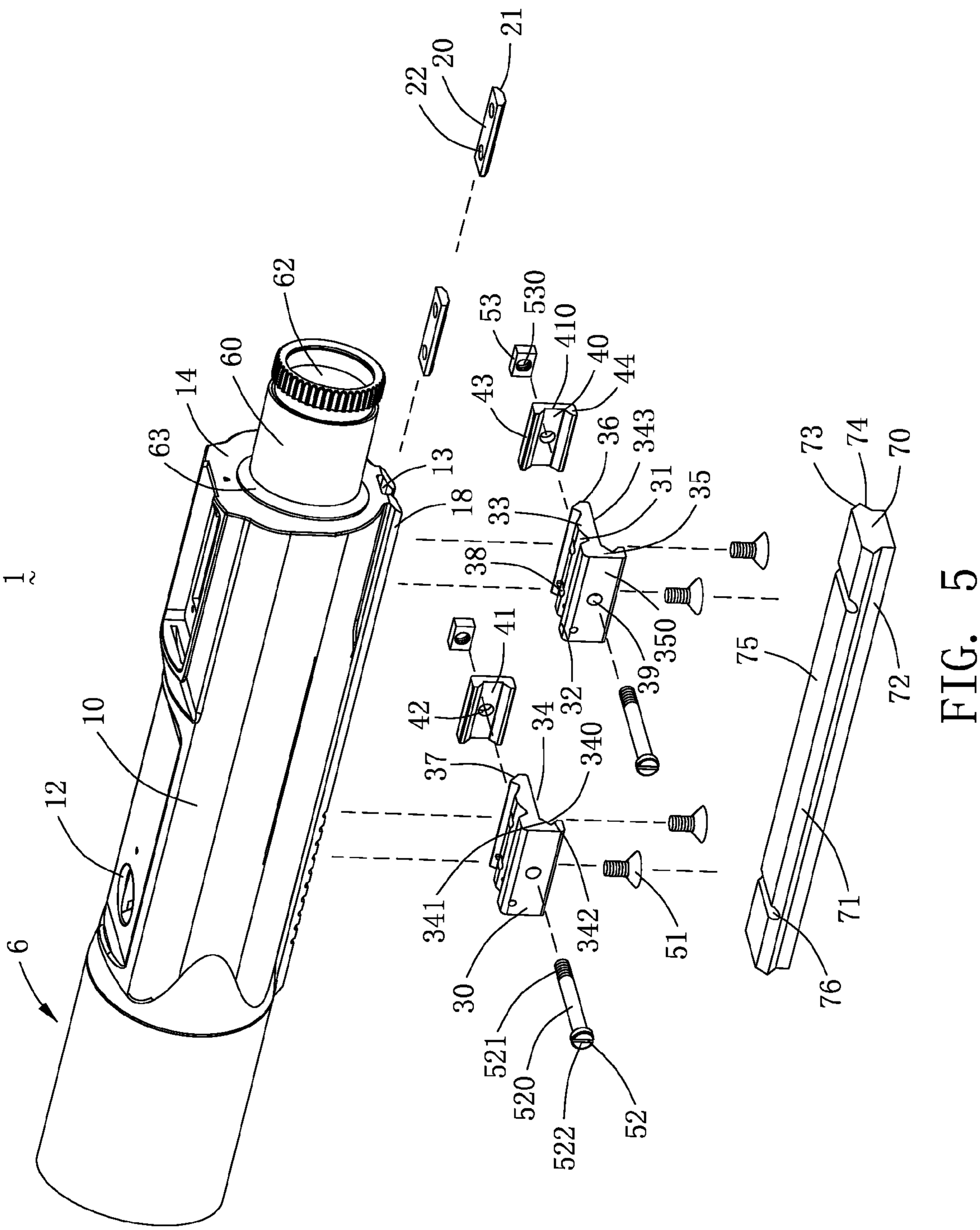

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FIG. 5

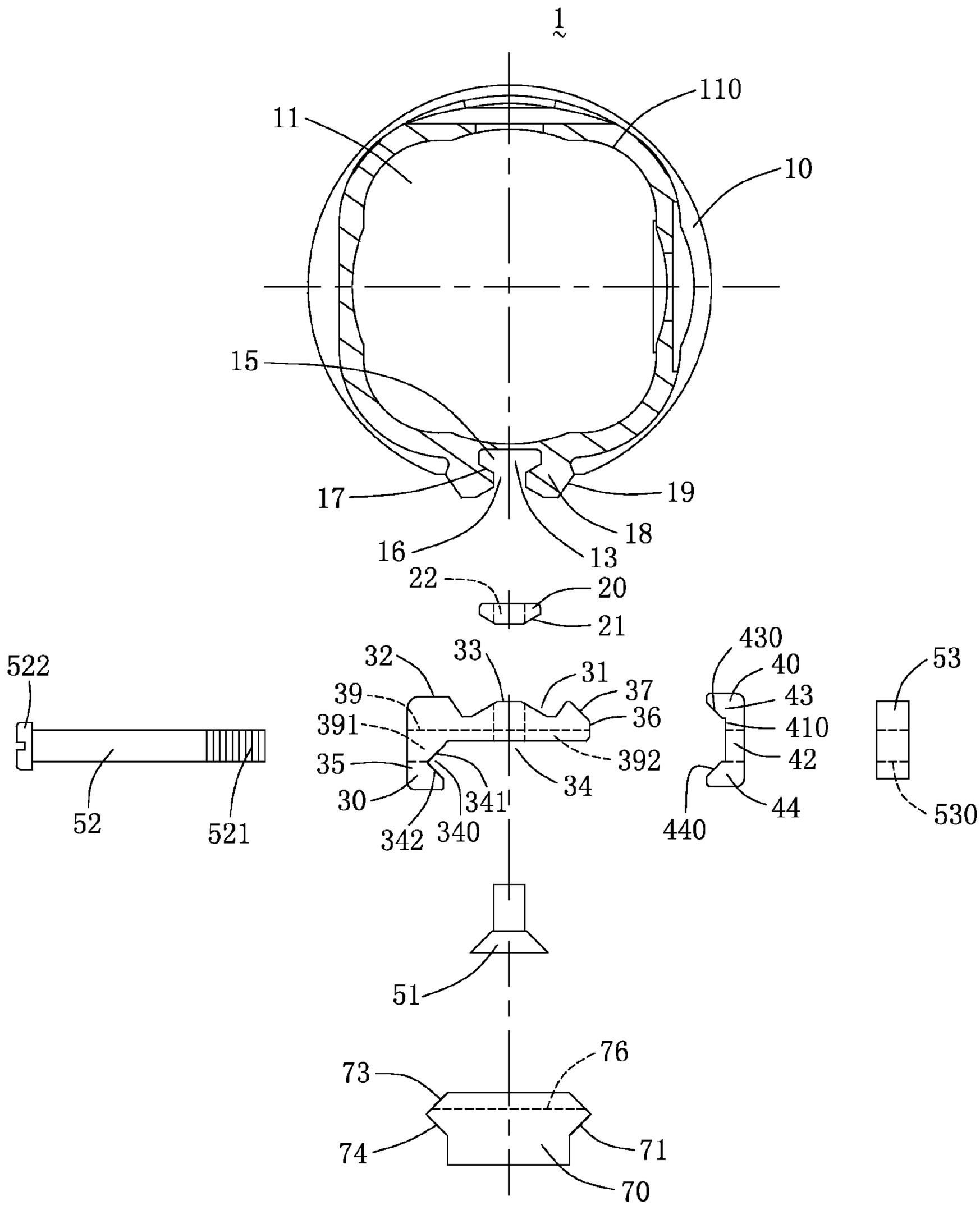
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FIG. 6

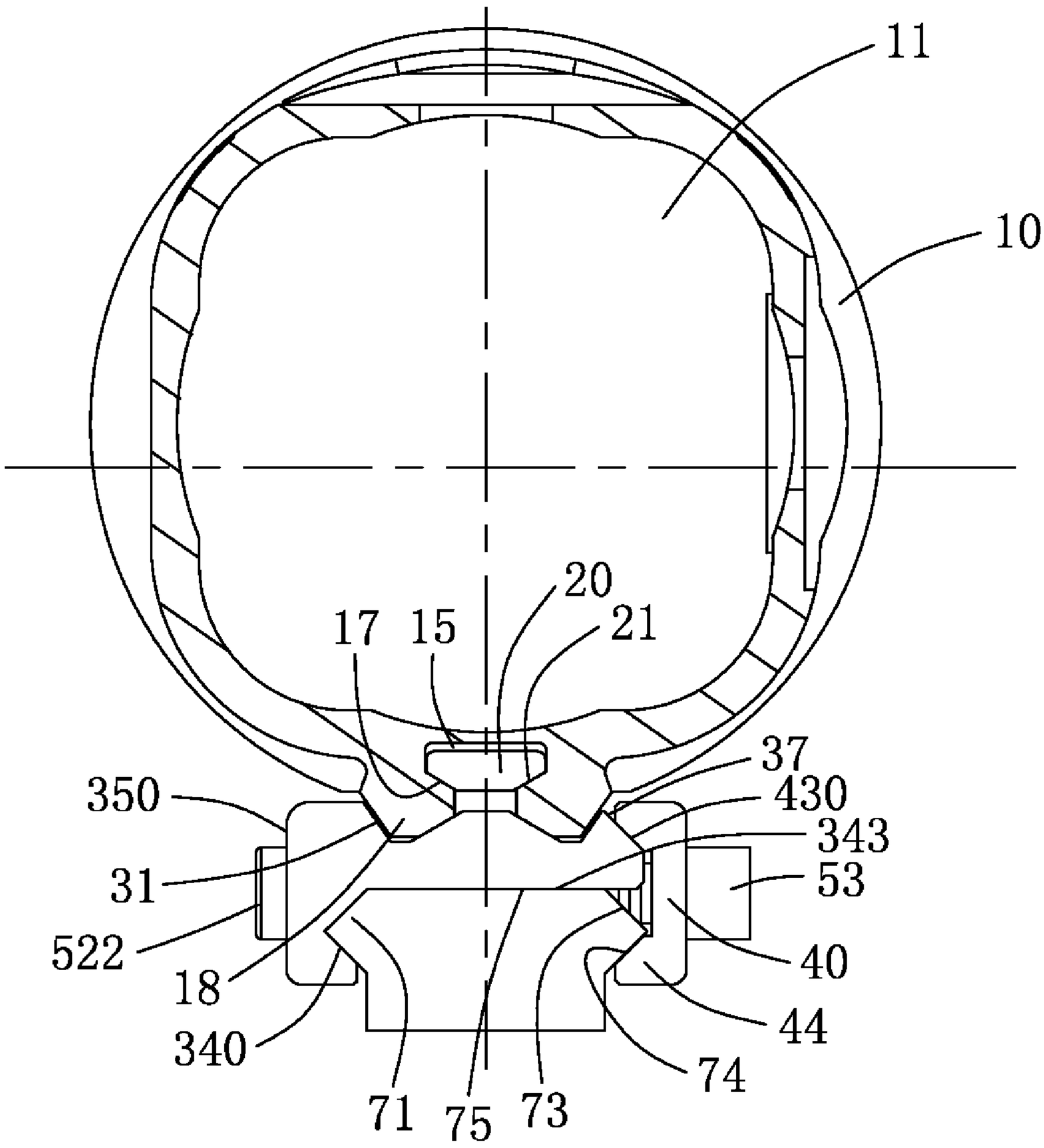

FIG. 7

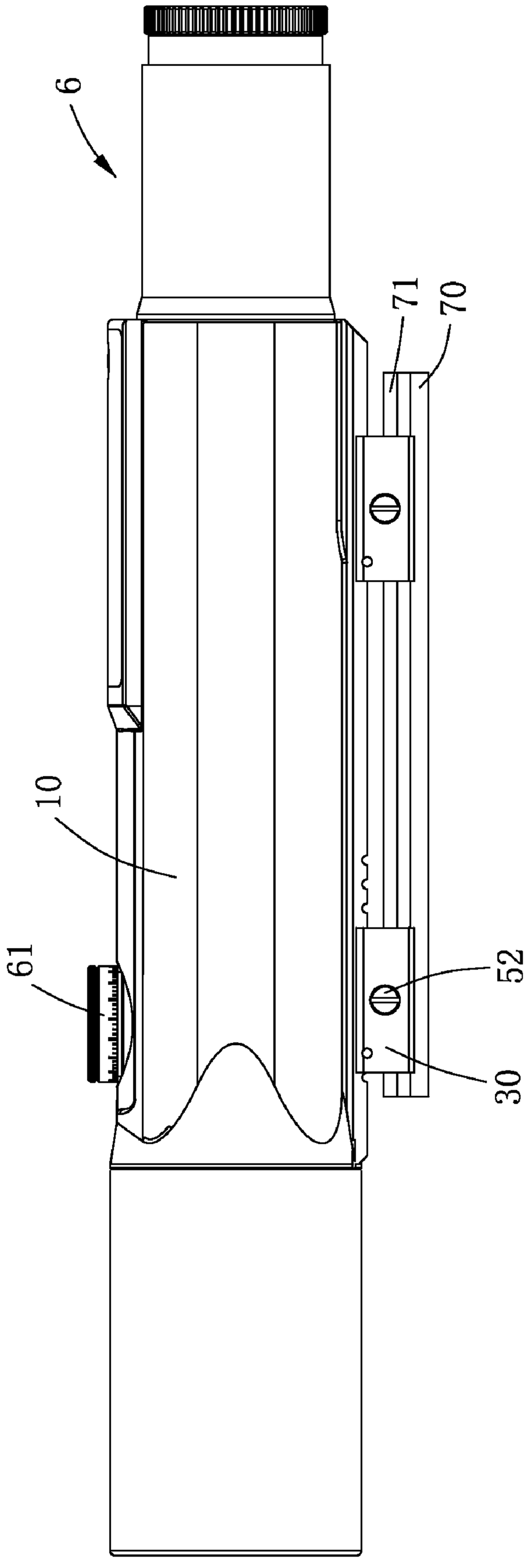

FIG. 8

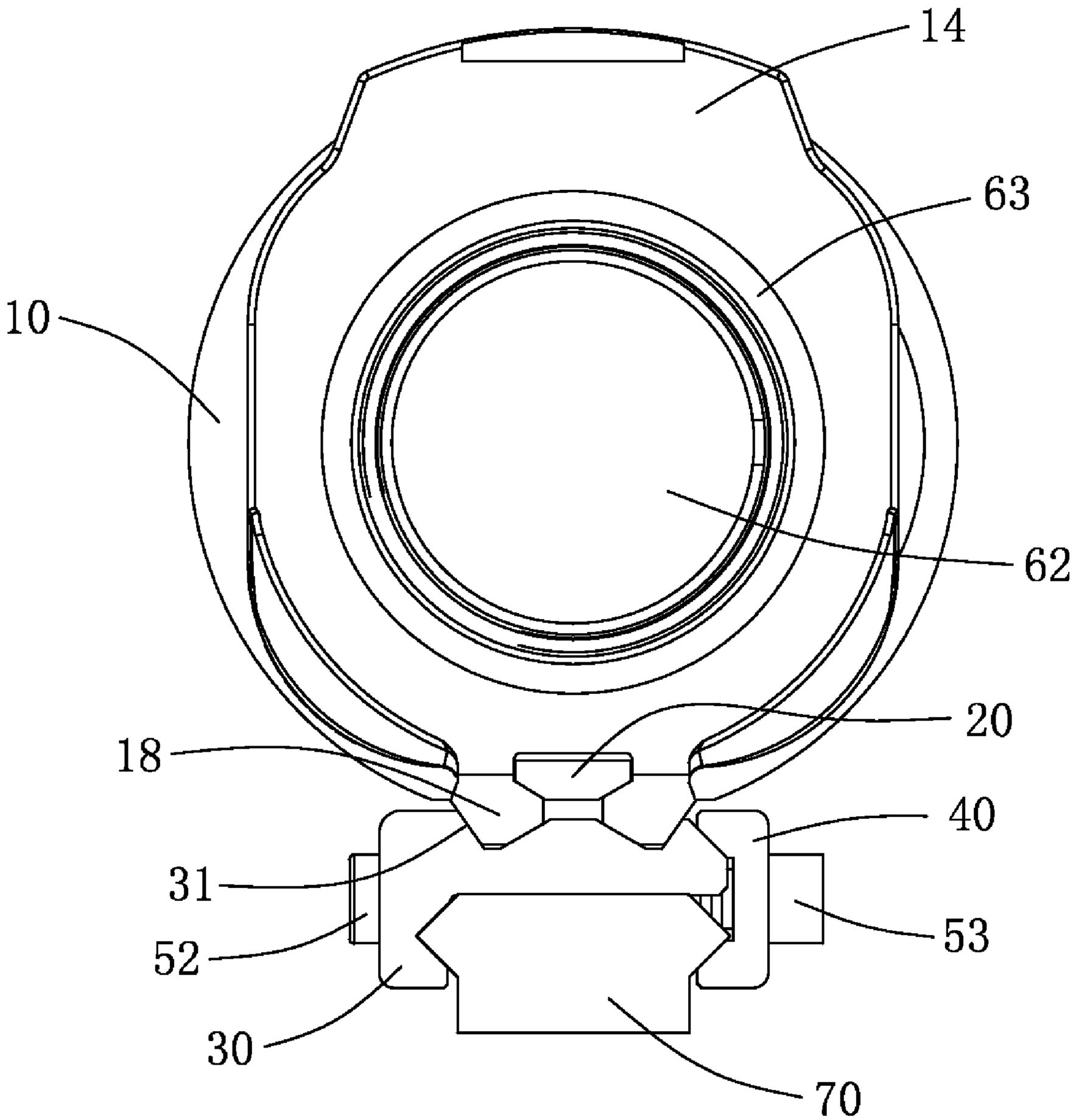

FIG. 9

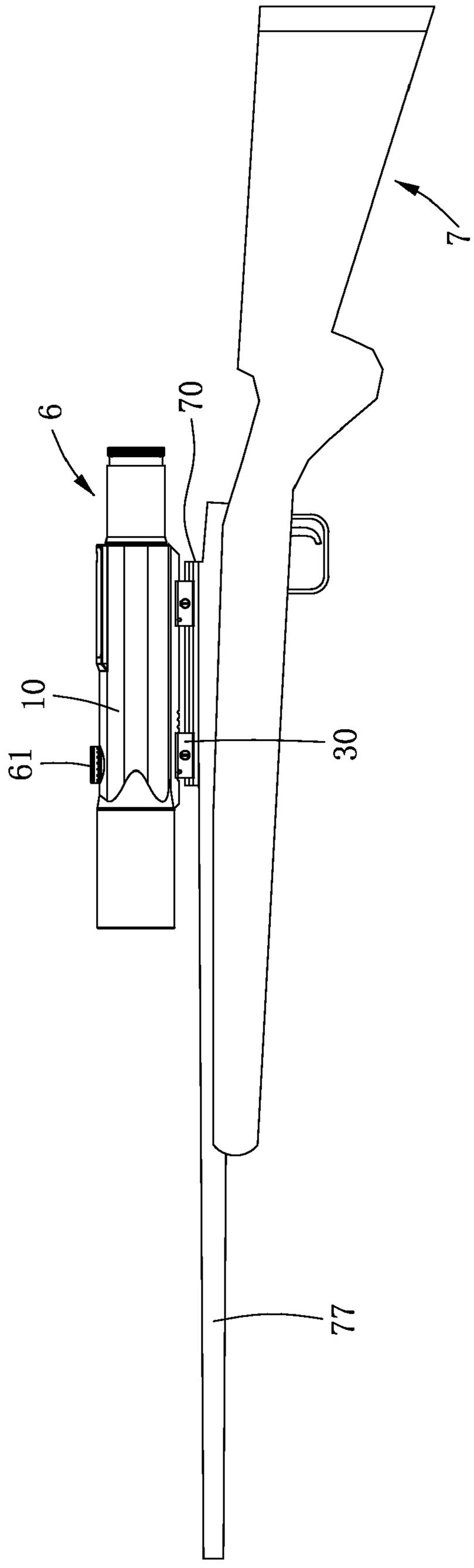

FIG. 10

UNIVERSAL SCOPE MOUNT FOR FIREARM

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a scope mount for firearms, and particularly to a universal scope mount that can attach a variety of different scopes or other accessories to a firearm such as a rifle, without the need to purchase multiple scope mounts.

2. Description of Prior Art

Firearms such as rifles have long included scopes for accurate aiming of the rifle at a target. Various different scopes have been developed which have different purposes and different sizes. These scopes are generally attached to the rifle in a readily detachable and replaceable manner, such that various different scopes can be interchangeably connected to the rifle depending on the needs of the user. To facilitate the secure and precise attachment of different scopes, rifles have been commonly configured to include a mount base at the top of the rifle which has become a standard for attachment of many different types of rifle scopes. A scope mount is subsequently attached to the mount base for mounting a scope on the rifle.

As shown in FIGS. **1-4**, in a typical conventional scope mounting arrangement, there provided two identical scope rings **8** which are spaced apart along the length of a rifle **7** thereby providing a two point mounting for a scope **9**. Each scope ring **8** includes a mount member **80** to be attached to a mount base **70** on the rifle **7** (shown in FIG. **4**) and a clamp member **81** to be attached to the mount member **80**. The mount member **80** has a base-engaging portion **82** defining a lengthwise channel **83** at the bottom thereof and a receptacle portion **84** integrally formed at the top of the base-engaging portion **82**. The lengthwise channel **83** has a general dovetail shape as viewed in FIGS. **1** and **2** which conforms with an upper engaging portion **78** of the mount base **70**. A lengthwise bore **85** is further defined in the base-engaging portion **82** in communication with the lengthwise channel **83** for extension of a bolt **52** therethrough. The receptacle portion **84** defines a semicircular receptacle **840** which receives a body **90** of the scope **9**. The semicircular receptacle **840** terminates in two outwardly projecting flanges **841** with one or more screw holes **842** vertically defined therethrough for reception of screws **51**. The clamp member **81**, which has a configuration similar to the receptacle portion **84** of the mount member **80**, also includes a semicircular receptacle **810**, two outwardly projecting flanges **811** and one or more screw holes **812** in each flange **811**.

When attaching the scope **9** to the rifle **7**, the mount member **80** of each scope ring **8** is first attached to the mount base **70** on the rifle **7** with the lengthwise channel **83** thereof receiving the complementary upper engaging portion **78** of the mount base **70** therein and with the lengthwise bore **85** thereof aligned with a corresponding groove **76** in the mount base **70**. A bolt **52** is then extended through the lengthwise bore **85** and the groove **76** in the mount base **70** with a free end thereof outwardly exposed for securing with a nut **53**, thereby securely attaching the mount member **80** to the mount base **70**. The scope body **90** is then positioned in the receptacle portions **84** of the front and rear mount members **80**. Once the scope **9** is in the desired position, the two clamp members **81** are placed over the body **90** of the scope **9** directly above the respective mount members **80** so that flanges **811** of each clamp member **81** align with flanges **841** of the corresponding mount member **80**. The clamp members **81** and the mount

members **80** are then attached together with screws **51**, thereby forming a scope ring **8** to clamp the scope **9** in place.

A significant problem with the above conventional scope rings **8** is that these scope rings **8** cannot be universally fit onto scope bodies **90** having different outer diameters. In order to achieve the secure attachment and thus aiming accuracy necessary for a scope **9**, a scope ring **8** having an inner ring diameter substantially equal to an outer diameter of the scope body **90** must be required.

This brings inconveniences to users that prefer to use several different scopes **9** on a single rifle **7**. In order for them to change scopes **9** having different body diameters, they would have to purchase new scope rings **8** to substitute the whole original scope ring **8** on the rifle **7**. This is uneconomical and takes time, besides the need for the user to purchase a separate scope ring **8** for each individual scope **9**. Further, the above conventional scope ring **8** is also limited in its applications in that it is inapplicable to scopes **9** having complex or irregular body contours. When the body **90** of a scope **9** is not cylindrical in shape or has an irregular contour, the above conventional scope ring **8** is no longer applicable to such a scope **9**. In addition, the above conventional scope ring **8** is complex in configuration, which is difficult to manufacture and thus increases cost.

Hence, an improved scope mount is desired to address the aforesaid shortcomings of conventional scope rings.

SUMMARY OF THE INVENTION

Accordingly, one object of the present invention is to provide a universal scope mount that allows the user to mount a large variety of different scopes or other accessories to a single firearm without the need to purchase multiple scope mounts.

Another object of the present invention is to provide a universal scope mount that is especially applicable to scopes having complex or irregular body contours.

A further object of the present invention is to provide a universal scope mount that is uncomplicated in configuration and easy to manufacture.

To achieve the above objects, the present invention provides a universal scope mount for a firearm having a mount base affixed thereon for mounting scopes and other accessories thereto. The mount base of the firearm has an upper attachment surface to which the scopes and other accessories can be connected. The present universal scope mount includes a housing and a pair of mounting assemblies. The housing has a chamber defined through front and rear ends thereof, a channel downwardly exposed and extending parallel to the chamber and a pair of projections formed along respective opposite sides of the channel. The chamber has an inner contour conforming to an outer contour of a body of a scope or an accessory to be received therein. The pair of mounting assemblies is used to respectively secure a front end portion and a rear end portion of the housing to the mount base of the firearm. Each mounting assembly includes a slider to be slidably received in the channel of the housing and supported by the projections of the housing, a mount member to be disposed between the housing and the mount base of the firearm, securing means to securely connect the mount member to the upper attachment surface of the mount base of the firearm, and fastening means to reliably assemble the housing, the slider and the mount member together. The slider has a cross-sectional contour substantially complementary to a cross-sectional contour of the channel of the housing. The mount member has an upper mating surface defining two grooves to receive corresponding projections of the housing

therein and a bottom opening having a cross-sectional contour substantially complementary to a cross-sectional contour of the mount base of the firearm.

According to a preferred embodiment of the present invention, the channel of the housing has a substantial T-shape in cross section and is comprised of an upper horizontal portion and a lower vertical portion, and the slider is received in the upper horizontal portion of the channel. The upper horizontal portion of the channel has opposed side slopes at a lower end thereof proximate to the lower vertical portion, and the slider has opposite side slopes to abut against corresponding side slopes of the channel. The side slopes of both the channel and the slider slant toward each other at an approximately 45-degree angle.

According to a preferred embodiment of the present invention, each projection of the housing has opposite side bevels at a free end thereof, and each groove of the mount member has opposite side slants to abut against the side bevels of a corresponding projection of the housing.

According to a preferred embodiment of the present invention, the mount member defines two through holes through the upper mating surface, and the slider defines two screw holes spaced at a distance substantially equal to that between the two through holes of the mount member. The two through holes of the mount member are defined through a mount tooth formed between the two grooves. The fastening means includes two screws to be respectively screwed into the two through holes of the mount member and the two screw holes of the slider.

According to a preferred embodiment of the present invention, the bottom opening of the mount member includes a roof having a width substantially equal to a width of the upper attachment surface of the mount base of the firearm.

According to a preferred embodiment of the present invention, the securing means includes a clamp member having an inner surface at least partially facing the cross-sectional contour of the bottom opening of the mount member, and an adjusting means to adjust the location of the clamp member toward and away from the cross-sectional contour of the bottom opening of the mount member, such that the clamp member can be caused to securely capture the mount base of the rifle between the clamp member and the cross-sectional contour of the bottom opening of the mount member. Preferably, the adjusting means includes a bolt to be extended through the mount member and the clamp member and a nut provided adjacent to the clamp member to be treaded onto a free end of the bolt.

According to a preferred embodiment of the present invention, the mount member has a side wall, a clamp side opposite to the side wall for connection with the clamp member and a bore defined therethrough in a direction perpendicular to the grooves for receiving the bolt, the bore including a base end in the side wall and a clamp end extending through the clamp side in communication with the bottom opening, and the clamp member defines a hole therethrough to align with the bore of the mount member and thus receive the free end of the bolt. The clamp end of the bore of the mount member is semi-circular in cross section to cooperate with a corresponding transverse groove in the upper attachment surface of the mount base of the firearm to form a circular hole for extension of the bolt.

According to a preferred embodiment of the present invention, the mount member has a side wall and a clamp side opposite to the side wall for connection with the clamp member, and the bottom opening of the mount member includes a notch defined in the side wall to complementally receive a side rib of the mount base of the firearm. The inner surface of the clamp member has a height greater than a height of the clamp side of the mount member.

According to a preferred embodiment of the present invention, the clamp member has upper and lower flanges extending from respective opposite ends thereof in a common direction toward the mount member, the lower flange having an inner slanted surface extending at an angle matching that of a lower slope of a side rib of the mount base of the firearm opposite to the side rib received in the notch of the mount member. The mount member further comprises an upper bevel oriented between one groove and the clamp side, and the upper flange of the clamp member has an inner slanted surface extending at an angle matching that of the upper bevel of the mount member.

The universal scope mount constructed according to the present invention increases the mount versatility to a wider variety of applications. The housing of the present universal scope mount is configured to define a chamber having an inner contour conforming to an outer contour of the body of a scope to be received. Accordingly, the present universal scope mount is applicable to various scopes including those having complex or irregular body contours. In addition, the present universal scope mount is relatively simple in configuration, which facilitates manufacture and thus reduces cost. The present universal scope mount is preferably made of a lightweight material such as extruded aluminum, whereby manufacture is further facilitated and both the cost and weight of the present universal scope mount are reduced.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be best understood through the following description with reference to the accompanying drawings, in which:

FIG. **1** is a perspective view of a conventional scope ring;

FIG. **2** is a planar view of the conventional scope ring;

FIG. **3** is a perspective view illustrating two conventional scope rings of FIG. **1** attached to a scope;

FIG. **4** is a side planar view showing the scope to be mounted on a rifle by engagement of the conventional scope rings with a mount base on the rifle;

FIG. **5** is an exploded, perspective view of a universal scope mount of the present invention, with a scope and a mount base of a rifle also included;

FIG. **6** is an exploded, end planar view of the present universal scope mount, with a housing thereof cross-sectioned and with the mount base of the rifle also included;

FIG. **7** is an assembled view of FIG. **6**;

FIG. **8** is a side planar view illustrating the present universal scope mount attached to a scope and engaged with the mount base of the rifle;

FIG. **9** is an end planar view of FIG. **8**; and

FIG. **10** is a side planar view showing a scope to be mounted on a rifle by engagement of the present universal scope mount with the mount base on the rifle.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In the following detailed description of the preferred embodiments, reference is made to the accompanying drawings that form a part hereof, and the description is given by way of illustration of specific embodiments that the present invention may be practiced. In this regard, directional terminology, such as “top”, “bottom”, “front”, “rear”, “upper”, “lower”, “inner”, and “outer” and the likes, is used with reference to the orientation of the figures being described.

Because components of the embodiments of the present invention can be positioned in a number of different orientations, the directional terminology is used for purposes of illustration and is in no way limiting.

As illustrated in FIG. **10**, a universal scope mount **1** provided in the present invention is used to couple with a mount base **70** affixed to the top of a rifle **7**, so as to attach a scope **6** to the rifle **7**. The mount base **70** is a standard component readily available in the market and is schematically shown in the drawings for simplicity. The illustrated scope **6** represents one example of a number of existing scopes already in the market, and a preferred embodiment of the present invention as described below is disclosed for use with these existing scopes and other similar devices.

Reference in now made to FIGS. **5** and **6**, which show exploded views of the universal scope mount **1** in accordance with a preferred embodiment of the present invention. The universal scope mount **1** generally comprises a housing **10** for receiving a scope **6** therein and two identical mounting assemblies, one set to secure a front end portion of the scope **6** to the rifle **7** and the other to secure a rear end portion of the scope **6**. Hence, only one mounting assembly will be described in detail hereinafter. Both the front and the rear mounting assemblies are comprised of four main elements: a slider **20**, a mount member **30** to connect the housing **10** to a mount base **70** provided at the top of the rifle **7**, securing means to securely connect the mount member **30** to an upper attachment surface **75** of the mount base **70**, and fastening means to reliably assemble the housing **10**, the slider **20** and the mount member **30** together. According to a preferred embodiment of the present invention, the securing means consists of a clamp member **40**, a bolt **52** and a nut **53**, and the fastening means consists of two screws **51**.

The housing **10** generally has a cylindrical outer contour and defines a chamber **11** through opposite ends thereof, an opening **12** in the top and a channel **13** in the bottom. The chamber **11** has an inner contour **110** conforming to an outer contour of a body **60** of the scope **6** for accommodating the scope body **60** therein. After proper positioning of the scope body **60** within the chamber **11** of the housing **10**, an elevation knob **61** (shown in FIG. **8**) provided at the top of the scope body **60** is upwardly exposed through the opening **12** for ease of manual operation, and a rear end surface **14** of the housing **10** proximate to an ocular lens **62** of the scope **6** abuts against a magnification ring **63** of the scope **6**, which is also shown in FIG. **9**. The channel **13** is defined in a lower surface of the housing **10** running the length of the housing **10** for receiving the slider **20** therein. The channel **13** is downwardly exposed and has a substantial T-shape in cross section. The channel **13** is comprised of an upper horizontal portion **15** and a lower vertical portion **16**. The upper horizontal portion **15** has two opposed side slopes **17** at a lower end thereof proximate to the lower vertical portion **16**. The two side slopes **17** slant toward each other at an approximately 45-degree angle. Provided on opposite sides of the channel **13** are two respective projections **18** each having opposite side bevels **19** at a free end thereof. The bevels **19** also extend toward each other at a selected angle.

The slider **20** has an outer contour conforming to an inner contour of the upper horizontal portion **15** of the channel **13**, so as to be slidably received in the channel **13** of the housing **10**. Correspondingly, the slider **20** also has opposite side slopes **21** at an approximately 45-degree angle toward a lower end thereof. Two screw holes **22** are defined through the slider **20** for extension of two respective screws **51**.

The mount member **30** substantially having a rotated L-shape is disposed between the housing **10** and the mount base **70**, and serves as a connecting element for connecting the latter two with each other. Therefore, the mount member **30** has a configuration substantially complementary to mating ends of the housing **10** and the mount base **70**. Specifically, two grooves **31** are defined in an upper mating surface **32** of the mount member **30** along the length of the mount member **30**. Each groove **31** has opposite sides slanted corresponding to the side bevels **19** of the projection **18** of the housing **10** for receiving the projection **18** therein. A mount tooth **33** is formed between the two grooves **31** to engage with an interspace between the two projections **18** of the housing **10**. The mount tooth **33** is trapezoidal in cross section. The mount member **30** further has a bottom opening **34** extending parallel to the grooves **31**. The bottom opening **34** has a notch **340** formed in a side wall **35** of the mount member **30** which extends perpendicularly from the upper mating surface **32**. The notch **340** includes an upper slope **341** and a lower slope **342**. The notch **340** is sized to receive one of side ribs **71** formed on the sides **72** of the mount base **70** therein, such that the upper slope **341** is adjacent an upper slope **73** of the side rib **71** of the mount base **70** and the lower slope **342** is adjacent a lower slope **74** of the side rib **71** of the mount base **70**. As clearly shown in FIG. **7**, the notch **340** is positioned such that when the side rib **71** of the mount base **70** is received in the notch **340**, the upper attachment surface **75** of the mount base **70** is substantially parallel to and abut against a roof **343** of the bottom opening **34**. The roof **343** has a width substantially equal to a width of the upper attachment surface **75** of the mount base **70**, such that a clamp side **36** of the mount member **30** opposite to the side wall **35** is positioned adjacent the upper slope **73** of one of the side ribs **71** opposite the side rib **71** oriented within the notch **340**, when the mount member **30** is overlying the upper attachment surface **75** of the mount base **70**. Hence, the mount member **30** is provided with a bottom contour complementary to the upper attachment surface **75** of the mount base **70**, providing the mount member **30** with a means to be securely connected to the upper attachment surface **75** of the mount base **70** when the clamp member **40** is utilized as described below. An upper bevel **37** is oriented between one groove **31** and the clamp side **36**. The upper bevel **37** is preferably angled within a plane which diverges from a plane including the upper mating surface **32** by an angle of approximately 45 degree. The clamp side **36** extends down from the upper bevel **37** to the roof **343**. The mount member **30** further defines two through holes **38** through the mount tooth **33**. The two through holes **38** are spaced at a distance substantially equal to that between the two screw holes **22** of the slider **20**, so that the through holes **38** can be aligned with corresponding screw holes **22** of the slider **20** for extension of the screws **51** therethrough. A bore **39** is further provided passing through the mount member **30** in a direction substantially perpendicular to the side wall **35** and the grooves **31**. The two through holes **38** are located at respective opposite sides of the bore **39**. As clearly shown in FIG. **6**, the bore **39** includes a base end **391** in the side wall **35** and a clamp end **392** extending through the clamp side **36**. The clamp end **392** is preferably semi-circular and is located at a lower end of the clamp side **36**.

The clamp member **40** is provided for connection of the mount member **30** to the mount base **70**. The clamp member **40** includes a body **41** defining a hole **42** therethrough corresponding to the bore **39** in the mount member **30**, and upper and lower flanges **43**, **44** perpendicularly extending from respective opposite ends of the body **41** in a common direction. Each of the upper and lower flanges **43**, **44** has an inner slanted surface **430**, **440** extending away from an inner surface **410** of the body **41** at an angle of approximately 45

degree which matches the angle of the upper bevel **37** of the mount member **30**. Preferably, an inner surface **410** of the body **41** has a height greater than a height of the clamp side **36** of the mount member **30**. Hence, as clearly shown in FIG. **7**, when the clamp member **40** is oriented with the inner surface **410** adjacent the clamp side **36** of the mount member **30**, the upper flange **43** overlies the upper bevel **37** of the mount member **30** and the lower flange **44** extends into the bottom opening **34** of the mount member **30** beneath the roof **343**. In this orientation, the lower flange **44** creates a recess together with the roof **343** of the mount member **30** which mirrors somewhat the orientation of the upper and lower slopes **341**, **342** of the notch **340** in the side wall **35** of the mount member **30** opposite the clamp member **40**.

Each of the two screws **51** is screwed into the respective through hole **38** defined in the mount member **30** and the respective screw hole **22** defined in the slider **20** which is already received in the channel **13** of the housing **10**, thereby assembling the housing **10**, the slider **20** and the mount member **30** together.

The bolt **52** is set to extend into the mount member **30** from a left side of the mount member **30** and supports the clamp member **40** and the nut **53** thereon. When the mount member **30** is oriented overlying the upper attachment surface **75** of the mount base **70**, the clamp member **40** can be positioned tightly against the mount base **70** by tightening the nut **53**, causing the mount member **30** to rigidly connect to the mount base **70**. The bolt **52** includes a shaft **520** and a threaded end **521** and a head **522** on opposite ends of the shaft **520**. The bolt **52** has a length greater than that of the mount member **30** and a diameter substantially identical to that of the bore **39** in the mount member **30**. Hence, the bolt **52** can be put through the bore **39** in the mount member **30** from the left side, until the head **522** abuts against an outer side surface **350** of the side wall **35** of the mount member **30**, as shown in FIG. **7**. In this position, the threaded end **521** of the bolt **52** extends out beyond the clamp side **36** of the mount member **30** for engagement with the clamp member **40** and the nut **53**.

The nut **53** functions to control the position of the clamp member **40** adjacent the clamp side **36** of the mount member **30**. The nut **53** defines a screw hole **530** therethrough which forms internal threads on an interior thereof to complementally engage external threads formed on the threaded end **521** of the bolt **52**. Hence, when the clamp member **40** is oriented adjacent the clamp side **36** of the mount member **30** with the hole **42** in the clamp member **40** overlying the bolt **52**, the nut **70** can be put into engagement with the threads of the bolt **52** and hold the clamp member **40** in place adjacent the clamp side **36** of the mount member **30**.

In this configuration, the clamp member **40** together with the coupled mount member **30** can coact with the side ribs **71** of the mount base **70** to securely connect the scope mount **1** to the mount base **70** of the rifle **7**. When the scope mount **1** is to be removed from the mount base **70**, the nut **53** is rotated to loosen the clamp member **40** from the clamp side **36** of the mount member **30**, allowing the side ribs **71** of the mount base **70** to be released. The clamp member **40** and the nut **53** thus provide one form of a means to selectively attach and detach the mount member **30** to the upper attachment surface **75** of the mount base **70**. It is noted that other forms of attaching and detaching means could also be adopted.

With the configuration of the universal scope mount **1** in accordance with the present invention, the scope **6** can be securely attached to the mount base **70** on the rifle **7** to assure accurate targeting alignment. By engagement of the slider **20** with the bottom channel **13** defined in the housing **10** and by engagement of the projections **18** of the housing **10** with the corresponding grooves **31** defined in the mount member **30**, both lateral and vertical movements of the universal scope mount **1** perpendicular to a long axis of the mount base **70** are prevented. Preferably, the channel **13** of the housing **10** and the corresponding slider **20**, and the projections **18** of the housing **10** and the corresponding grooves **31** of the mount member **30**, are all configured to have slanted sides at predetermined angles for enhancing engagement therebetween. It is noted that other angles could be equally selected for these slanted sides, provided corresponding mating sides are parallel to each other. Further, longitudinal movement of the universal scope mount **1** along the long axis of the mount base **70** is prevented by the shaft **520** of the bolt **52** fit into and received in the bore **39** of the mount member **30** and a corresponding transverse groove **76** defined in the upper attachment surface **75** of the mount base **70**. The friction between the clamp member **40** and one of the side ribs **71** of the mount base **70** and the friction between the upper and lower slopes **341**, **342** of the mount member **30** and the other side rib **71** of the mount base **70** further prevent movement of the scope mount **1** off the mount base **70**. Therefore, the scope **6** can be securely attached to the mount base **70** on the rifle **7** by the universal scope mount **1** of the present invention. Accurate targeting alignment of the scope **6** on the rifle **7** is also assured, since the housing **10** of the universal scope mount **1** is fixed to the mount base **70** in a parallel manner, as shown in FIG. **10**. The mount base **70** is also attached to the rifle **7** with a long axis thereof precisely parallel to a barrel **77** of the rifle **7**.

The configuration of the universal scope mount **1** of the present invention increases the mount versatility to a wider variety of applications. The housing **10** of the universal scope mount **1** is configured to define a chamber **11** having an inner contour conforming to an outer contour of the body **60** of a scope **6** to be received. When a user is desired to replace an original scope **6** mounted on the rifle **7** with another scope **6** having different outer diameters or outer contours, the user only needs to replace the original housing **10** with a new one, without the need to purchase a separate scope mount for each individual scope. Accordingly, the universal scope mount **1** of the present invention is applicable to various scopes including those having complex or irregular body contours. Hence, nearly any scope or other accessory that is connectable to the mount base **70** of the rifle **7** can be universally fit to the rifle **7** by the universal scope mount **1** of the present invention.

In addition, the universal scope mount **1** is relatively simple in configuration, which facilitates manufacture and thus reduces cost. The universal scope mount **1** is preferably made of a lightweight material. While a number of possible materials are suitable for the universal scope mount **1**, a preferred material is extruded aluminum, whereby manufacture is further facilitated and both the cost and weight of the universal scope mount **1** are reduced.

It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A universal scope mount for a firearm having a mount base affixed thereon for mounting scopes and other accessories thereto, the mount base of the firearm having an upper

attachment surface to which the scopes and other accessories can be connected, the universal scope mount comprising:

a housing having a chamber defined through front and rear ends thereof, a channel downwardly exposed and extending parallel to the chamber and a pair of projections formed along respective opposite sides of the channel, the chamber having an inner contour conforming to an outer contour of a body of a scope or an accessory to be received therein, and the housing further defining an opening at the top for extension of an elevation knob of the scope therethrough; and

a pair of mounting assemblies to respectively secure a front end portion and a rear end portion of the housing to the mount base of the firearm, each mounting assembly comprising:

a slider to be slidably received in the channel of the housing and supported by the projections of the housing, the slider having a cross-sectional contour substantially complementary to a cross-sectional contour of the channel of the housing;

a mount member disposed between the housing and the mount base of the firearm, the mount member having an upper mating surface defining two grooves to receive corresponding projections of the housing therein and a bottom opening having a cross-sectional contour substantially complementary to a cross-sectional contour of the mount base of the firearm;

securing means to securely connect the mount member to the upper attachment surface of the mount base of the firearm; and

fastening means to reliably assemble the housing, the slider and the mount member together.

2. The universal scope mount as claimed in claim **1**, wherein the channel of the housing has a substantial T-shape in cross section and is comprised of an upper horizontal portion and a lower vertical portion.

3. The universal scope mount as claimed in claim **2**, wherein said slider is received in the upper horizontal portion of the channel.

4. The universal scope mount as claimed in claim **3**, wherein the upper horizontal portion of the channel has opposed side slopes at a lower end thereof proximate to the lower vertical portion, and said slider has opposite side slopes to abut against corresponding side slopes of the channel.

5. The universal scope mount as claimed in claim **4**, wherein the side slopes of both the channel and said slider slant toward each other at an approximately 45-degree angle.

6. The universal scope mount as claimed in claim **1**, wherein each projection of the housing has opposite side bevels at a free end thereof, and each groove of said mount member has opposite side slants to abut against the side bevels of a corresponding projection of the housing.

7. The universal scope mount as claimed in claim **1**, wherein said mount member defines two through holes through the upper mating surface, and said slider defines two screw holes spaced at a distance substantially equal to that between the two through holes of said mount member.

8. The universal scope mount as claimed in claim **7**, wherein the two through holes of said mount member are defined through a mount tooth formed between the two grooves.

9. The universal scope mount as claimed in claim **7**, wherein the fastening means includes two screws to be respectively screwed into said two through holes of said mount member and said two screw holes of said slider.

10. The universal scope mount as claimed in claim **1**, wherein the bottom opening of said mount member includes a roof having a width substantially equal to a width of the upper attachment surface of the mount base of the firearm.

11. The universal scope mount as claimed in claim **1**, wherein the securing means includes a clamp member having an inner surface at least partially facing the cross-sectional contour of the bottom opening of said mount member, and an adjusting means to adjust the location of said clamp member toward and away from the cross-sectional contour of the bottom opening of said mount member, such that said clamp member can be caused to securely capture the mount base of the rifle between said clamp member and the cross-sectional contour of the bottom opening of said mount member.

12. The universal scope mount as claimed in claim **11**, wherein the adjusting means includes a bolt to be extended through said mount member and said clamp member and a nut provided adjacent to said clamp member to be treaded onto a free end of the bolt.

13. The universal scope mount as claimed in claim **12**, wherein said mount member has a side wall, a clamp side opposite to the side wall for connection with said clamp member and a bore defined therethrough in a direction perpendicular to the grooves for receiving the bolt, the bore including a base end in the side wall and a clamp end extending through the clamp side in communication with the bottom opening, and wherein said clamp member defines a hole therethrough to align with the bore of said mount member and thus receive the free end of the bolt.

14. The universal scope mount as claimed in claim **13**, wherein the clamp end of the bore of said mount member is semi-circular in cross section to cooperate with a corresponding transverse groove in the upper attachment surface of the mount base of the firearm to form a circular hole for extension of the bolt.

15. The universal scope mount as claimed in claim **11**, wherein said mount member has a side wall and a clamp side opposite to the side wall for connection with said clamp member, and wherein the bottom opening of said mount member includes a notch defined in the side wall to complementally receive a side rib of the mount base of the firearm.

16. The universal scope mount as claimed in claim **15**, wherein the inner surface of said clamp member has a height greater than a height of the clamp side of said mount member.

17. The universal scope mount as claimed in claim **16**, wherein said clamp member has upper and lower flanges extending from respective opposite ends thereof in a common direction toward said mount member, the lower flange having an inner slanted surface extending at an angle matching that of a lower slope of a side rib of the mount base of the firearm opposite to the side rib received in the notch of said mount member.

18. The universal scope mount as claimed in claim **17**, wherein said mount member further comprises an upper bevel oriented between one groove and the clamp side, and the upper flange of said clamp member has an inner slanted surface extending at an angle matching that of the upper bevel of said mount member.

19. The universal scope mount as claimed in claim **1**, wherein the universal scope mount is made of extruded aluminum.

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